Charles L. Miller, Banner & Witcoff, Ltd.
Title: Method and Apparatus for Processing
Data in a Content Network
Inventor: Sanjay Mathur, et al.
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Portable

- Calendar
- Addresses
- Personal
  Preferences

102

Home

- Wallet
- Finances
- Possesion
  Inventory
- Files
- Purchase
  History
- Medical
  History

104

110

COMMUNICATION
NETWORK

Work

- Files
- Schedule
- Addresses
- To Do

106

Automobile

- Music
  Preferences
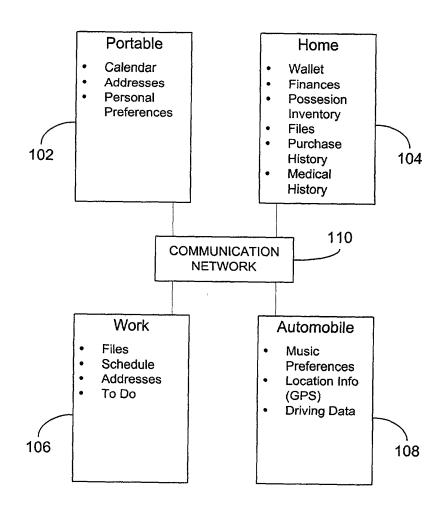- Location Info
  (GPS)
- Driving Data

108

FIG. 1
-PRIOR ART-

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Data in a Content Network
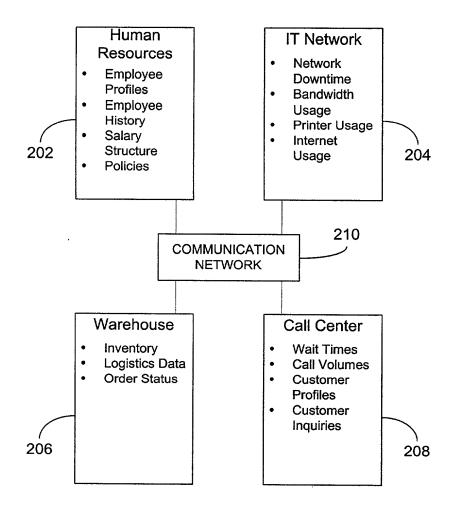Inventor: Sanjay Mathur, et al.
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Human Resources

- Employee Profiles
- Employee History
- Salary Structure
- Policies

202

IT Network

- Network Downtime
- Bandwidth Usage
- Printer Usage
- Internet Usage

204

COMMUNICATION NETWORK

210

Warehouse

- Inventory
- Logistics Data
- Order Status

206

Call Center

- Wait Times
- Call Volumes
- Customer Profiles
- Customer Inquiries

208

FIG. 2
-PRIOR ART-

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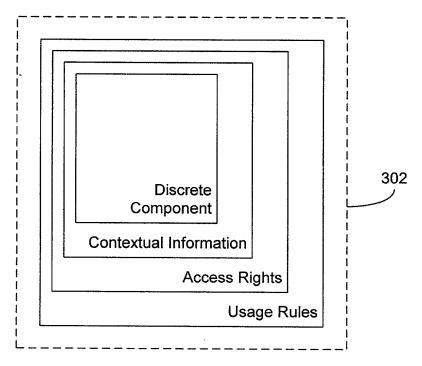Data in a Content Network
Inventor: Sanjay Mathur, et al.
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Discrete
Component

Contextual Information

Access Rights

Usage Rules

302

FIG. 3

Dynamic
Discovery

Monitoring

Identity Agent

Filtering

406

Profile

404

Preferences

402

Fulfilling
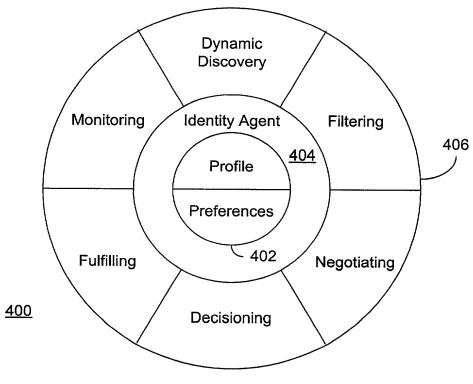
Negotiating

Decisioning

400

FIG. 4

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Data in a Content Network
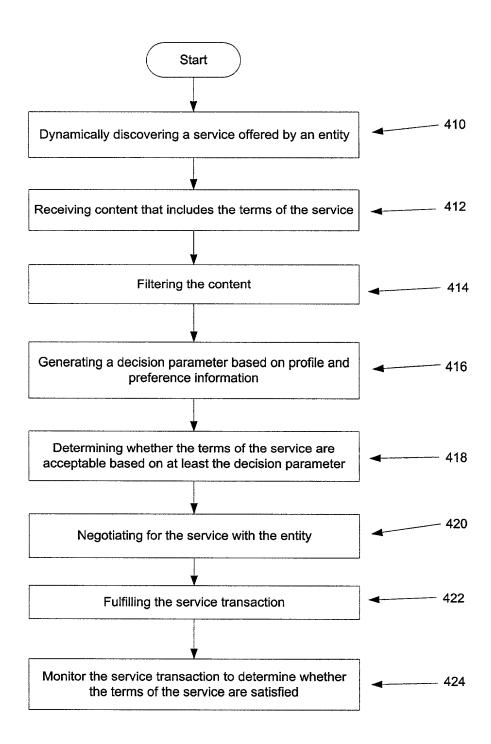Inventor: Sanjay Mathur, et al.
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Start

Dynamically discovering a service offered by an entity — 410

Receiving content that includes the terms of the service — 412

Filtering the content — 414

Generating a decision parameter based on profile and preference information — 416

Determining whether the terms of the service are acceptable based on at least the decision parameter — 418

Negotiating for the service with the entity — 420

Fulfilling the service transaction — 422

Monitor the service transaction to determine whether the terms of the service are satisfied — 424

FIG. 4A

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Data in a Content Network
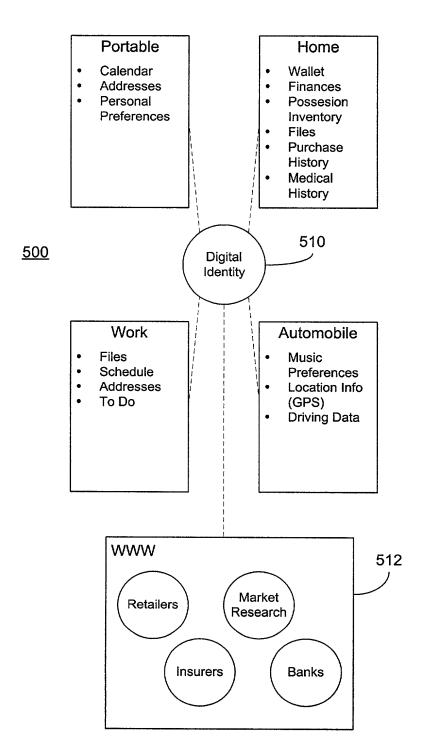Inventor: Sanjay Mathur, et al.
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Portable

- Calendar
- Addresses
- Personal Preferences

Home

- Wallet
- Finances
- Possesion Inventory
- Files
- Purchase History
- Medical History

500

Digital Identity

510

Work

- Files
- Schedule
- Addresses
- To Do

Automobile

- Music Preferences
- Location Info (GPS)
- Driving Data

WWW

Retailers

Market Research

Insurers

Banks

512

FIG. 5

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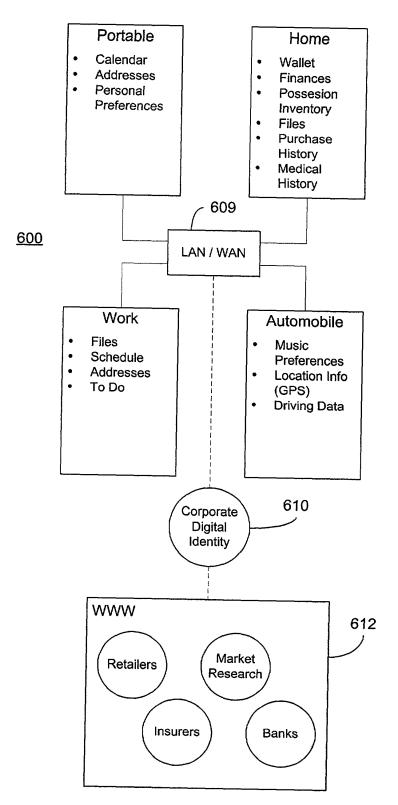Inventor: Sanjay Mathur, et al.
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Portable

- Calendar
- Addresses
- Personal Preferences

Home

- Wallet
- Finances
- Possesion Inventory
- Files
- Purchase History
- Medical History

609

600

LAN / WAN

Work

- Files
- Schedule
- Addresses
- To Do

Automobile

- Music Preferences
- Location Info (GPS)
- Driving Data

Corporate Digital Identity

610

WWW

612

Retailers

Market Research

Insurers

Banks

FIG. 6

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CLIENTS 702
- Phone
- PDA
- Browser
- Agent
- Bots
- Partner Systems

ACCESS 704

http
- ORB
- SOAP

wtp
- ORB
- WAP

BUSINESS LOGIC 706

Application Services

Rights Management
- Enforcement
- Tracking
- Auditing
- Authentication

Digital Identity
- Discovery
- Monitoring
- Decisioning
- Filtering
- Negotiating
- Fulfilling

Renderer
- XSL
- DOM

Architecture Services
- Service Directory
- SOAP
- COM/CORBA

Data Access
- ODBC
- XML
- File System

DATA STORAGE 708

- Content

Meta Data
- Context
- Usage Rights
- Access Rules

Persona
- Preferences
- Profile

Architecture Services
- RDBMS
- XML Store

CONTENT LOGIC 710

Application Services

Content Conversion
- Translation
- Transformation
- Aggregation

Architecture Services
- Service Directory
- SOAP
- COM/CORBA

Data Access
- ODBC
- XML
- File System

CONTENT SOURCES 712
- Embedded Device
- Manual Input
- Partner Systems
- Screen Scrapes

FIG. 7

Charles L. Miller, Banner & Witcoff, Ltd.
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Data in a Content Network
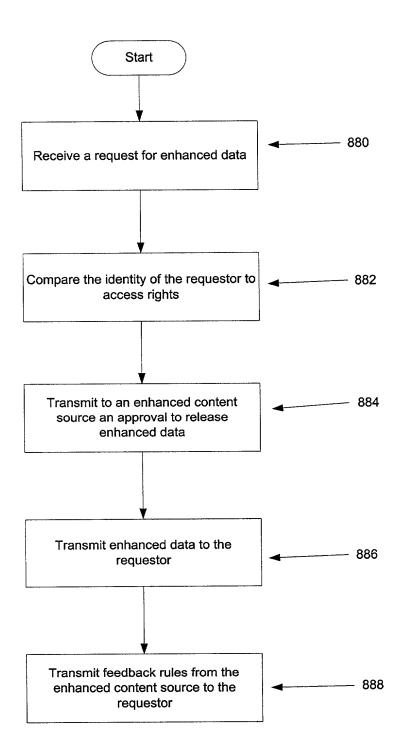Inventor: Sanjay Mathur, et al.
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User Access Devices

806

804

802

822

824

820

810

Public
Network

830

3rd Party Content Owner

856

854

852

Content Server

Application Server

Network Server

858

860

Data Mining Server

Enterprise DB Server

864

Data

862

Data

Digital Identity Provider

844

842

Network Server

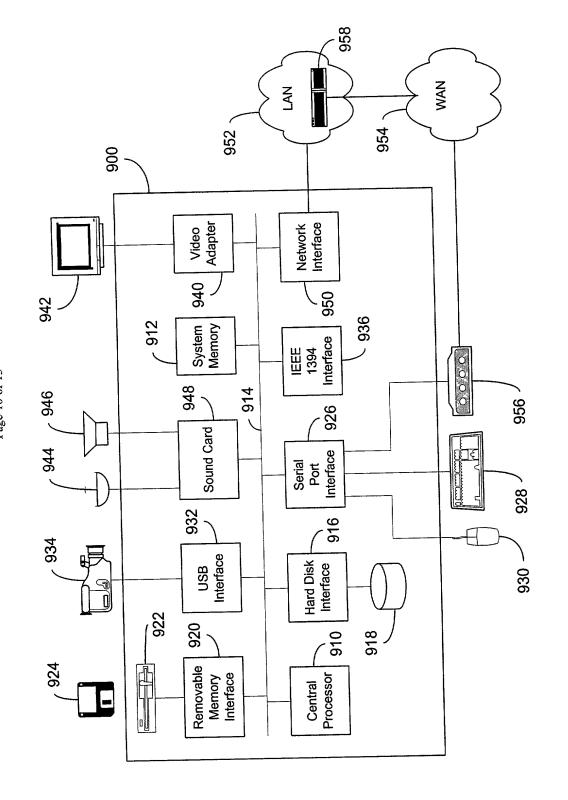Transaction Server

846

Profile

800

FIG. 8

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Data in a Content Network
Inventor: Sanjay Mathur, et al.
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Start

Receive a request for enhanced data — 880

Compare the identity of the requestor to access rights — 882

Transmit to an enhanced content source an approval to release enhanced data — 884

Transmit enhanced data to the requestor — 886

Transmit feedback rules from the enhanced content source to the requestor — 888

FIG. 8A

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Data in a Content Network
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FIG. 9

Charles L. Miller, Banner & Witcoff, Ltd.
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Data in a Content Network
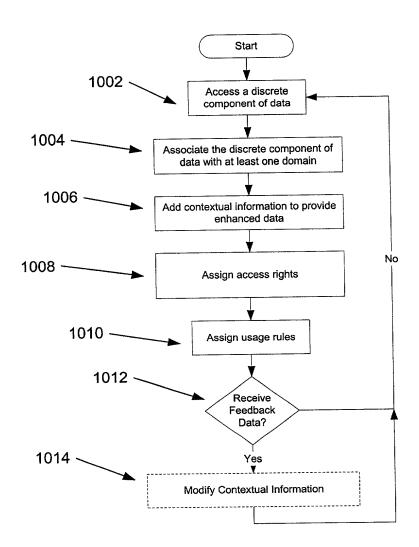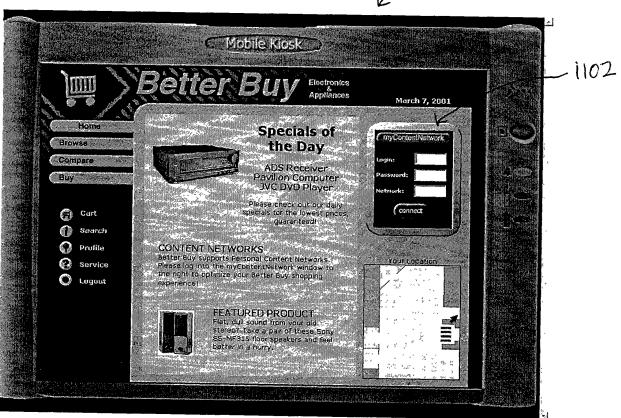Inventor: Sanjay Mathur, et al.
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Start

1002 — Access a discrete component of data

1004 — Associate the discrete component of data with at least one domain

1006 — Add contextual information to provide enhanced data

1008 — Assign access rights

1010 — Assign usage rules

1012 — Receive Feedback Data?

No

Yes

1014 — Modify Contextual Information

FIG. 10

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1100

1102

FIG. 11

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Data in a Content Network
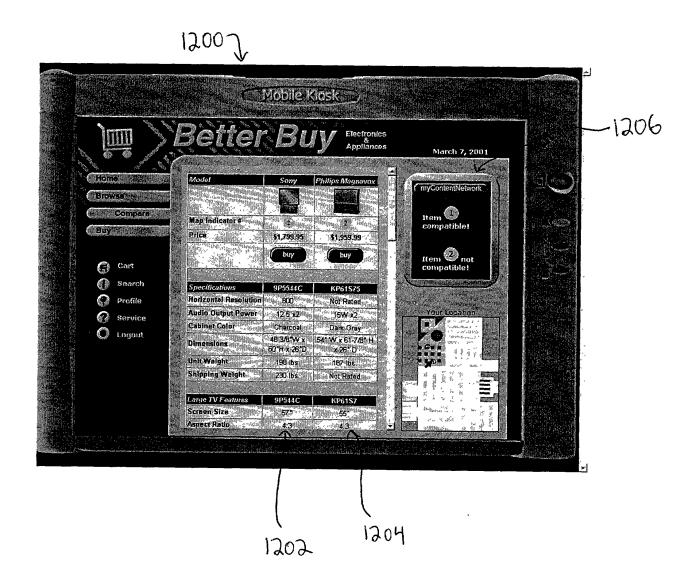Inventor: Sanjay Mathur, et al.
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1200

1206

1202   1204

FIG. 12